

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 January 2005 (27.01.2005)

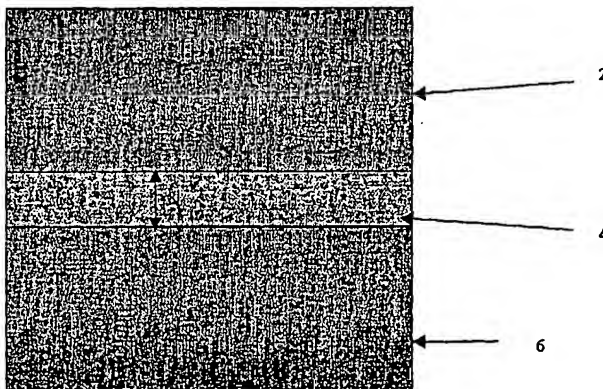
PCT

(10) International Publication Number  
**WO 2005/007754 A1**

- (51) International Patent Classification<sup>7</sup>: C09C 1/00, 1/62, 1/64, C09D 7/12, 5/00
- (21) International Application Number: PCT/GB2004/003005
- (22) International Filing Date: 12 July 2004 (12.07.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0316198.1 11 July 2003 (11.07.2003) GB
- (71) Applicant (for all designated States except US): QINETIQ LIMITED [GB/GB]; 85 Buckingham Gate, London SW1E 6PD (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): O'KEEFE, Eoin, Selorse [GB/GB]; QinetiQ Limited, Bldg A7, Room 1146, Cody Technology Park, Ively Road, Farnborough, Hampshire GU14 0LX (GB).
- (74) Agent: TOCHER, Alastair; Qinetiq Ltd, IP Formalities, Cody Technology Park, A4 Building, Room G016, Ively Road, Farnborough, Hampshire GU14 0LX (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: THERMAL INFRA-RED REFLECTIVE PIGMENTS FOR COATINGS



(57) Abstract: This invention relates to the control of radiant thermal energy and more specifically to highly Thermal Infrared (IR<sub>T</sub>) reflective pigments for use in decorative coatings for buildings or other areas where the control of IR<sub>T</sub> energy and visual decoration are required. Control of the spread of thermal energy in domestic buildings through passive techniques reduces energy consumption by reducing reliance on heating in cool environments and cooling air-conditioning in warm environments. A number of paint formulations having low emissivity in the thermal infrared exist which are based on variants of conventional decorative paint fluids. There are a number of problems associated with such formulations such as susceptibility to damage and high emissivity for certain colour pigmentations. The present invention proposes a low emissivity flake (1) for use in a paint formulation which substantially overcomes the problems associated with the prior art.

WO 2005/007754 A1

BEST AVAILABLE COPY



**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*